

Remarks

Claims 1, 3, 5-9, and 12 are pending in the subject application and are currently before the Examiner. Favorable consideration of the pending claims is respectfully requested.

The applicants gratefully acknowledge the Examiner's indication that the rejections under 35 U.S.C. §112, first paragraph, and under 35 U.S.C. §102(b) are withdrawn.

Claims 1, 3, 5-9, and 12 have been rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over the Lunardi Doctoral Dissertation. The applicants respectfully traverse these grounds for rejection and submit that the Lunardi Doctoral Dissertation is not prior art to the claimed invention.

As an initial matter, the Office Action indicates that claims 1, 3, 5-9, and 12 have been rejected under 35 U.S.C. §102(b). As the Examiner is undoubtedly aware, to be anticipatory under 35 U.S.C. §102(b), the claimed invention must be described in a printed publication more than one year prior to the effective date of the patent application. The filing date of the subject application is October 17, 2001. As indicated in the supplemental Information Disclosure Statement (IDS) the applicants submitted to the Patent Office on December 16, 2003, the Lunardi Doctoral Dissertation was confidentially held (via petition) by the University of Florida Graduate School until shelved in the Marston Science Library between February 2001 and May 2001. A copy of the Lunardi Doctoral Dissertation accompanied the IDS, including a cover page stamped February 27, 2001 by Information Conservation Inc., which was the approximate date the Dissertation was recorded in microfiche format prior to shelving in the library. Therefore, the Lunardi Doctoral Dissertation was not made publicly available more than one year prior to the filing date of the subject application and cannot be the basis of a rejection under 35 U.S.C. §102(b).

As the Examiner is undoubtedly aware, the requirement for authorship and inventorship are not the same. The applicants submit that it is conventional protocol within the academic and research community to designate only the graduate degree candidate as the author of a submitted dissertation or thesis. However, this does not mean that student authors act in a vacuum without assistance and input from their academic advisor or other scientists that are collaborating with or reviewing a student's work.

Submitted herewith for the Examiner's consideration is a Declaration under 37 C.F.R. § 1.132 by Dr. Christopher Batich, one of the inventors on the subject application. The Batich Declaration was not presented earlier during prosecution of the subject application because the Lunardi Doctoral Dissertation was first made the basis for a rejection in the outstanding Office Action. As Dr. Batich explains in his Declaration, the currently named applicants are, indeed, the inventors of the subject matter contained in the claims of the subject application and the inventors of the subject matter described in the Lunardi Doctoral Dissertation which corresponds to that contained in the claims. As pointed out in the Declaration, it is standard practice within the academic and research community to designate only the graduate candidate as the author of a submitted dissertation, despite the fact that others may have contributed to the conception of the subject matter contained within the dissertation. Gilberto Lunardi was the graduate candidate and author of the Lunardi Doctoral Dissertation. As indicated in Dr. Batich's Declaration, Dr. Batich was Gilberto Lunardi's advisor and chair of his graduate research committee. Dr. Batich and Dr. Lunardi contributed to the conception of the claimed invention and are, therefore, inventors on the subject application. Dr. Kenneth Berger and Dr. Steven Sargent, who were also on Dr. Lunardi's research committee, contributed to the conception of the claimed invention and are, therefore, inventors on the subject application.

Dr. Jorge Zacca, who was not a member of Gilberto Lunardi's graduate research committee, also contributed to the conception of the claimed invention and is, therefore, an inventor on the subject application. Dr. Batich also explains in his declaration that, although Dr. Goldberg, Dr. Brennan, and Dr. Wagener were acknowledged as members of Dr. Lunardi's research committee, these individuals did not contribute to the conception of the claimed invention. Therefore, despite their helpful research assistance, they were not included as co-inventors on the subject application. Therefore, the subject matter pertaining to the claimed invention that is described within the Lunardi Doctoral Dissertation was invented by the named co-inventors, *i.e.*, Dr. Gilberto Lunardi, Dr. Christopher Batich, Dr. Kenneth Berger, Dr. Steven Sargent, and Dr. Jorge Zacca. Therefore, the Lunardi Doctoral Dissertation represents the inventors' own disclosure of their invention published less than one year prior to the effective filing date of the subject application.

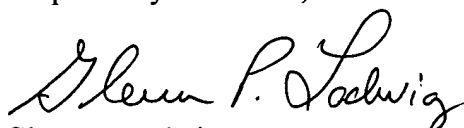
“[O]ne’s own invention, whatever the form of disclosure to the public, may not be prior art against oneself, absent a statutory bar.” *In re Facius*, 161 USPQ 294, 301 (CCPA 1969). The Lunardi Doctoral Dissertation is, as pointed out above, a disclosure by the inventors of their own work that was published less than one year prior to the filing date of the subject application. Therefore, under the authority of *In re Facius*, the disclosure contained in the Lunardi Doctoral Dissertation cannot be used as a reference against the applicants’ claimed invention. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b) and §103(a) is respectfully requested.

In view of the foregoing remarks and amendments to the claims, the applicants believe that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 or 1.17 as required by this paper to Deposit Account 19-0065.

The applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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Attachments: Petition and Fee for Extension of Time  
Declaration under 37 C.F.R. § 1.132 by Dr. Christopher Batich with Exhibit A



Patent Application  
Docket No. UF-282  
Serial No. 09/981,183

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner : William K. Cheung  
Art Unit : 1713  
Applicants : Gilberto Joao Lunardi, Christopher D. Batich, Jorge Jardim Zacca,  
Kenneth Ray Berger, Steven Sargent  
Serial No. : 09/981,183  
Filed : October 17, 2001  
Confirm. No. : 5406  
For : Thermally Responsive Polymer Materials and Uses Thereof

MS AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

DECLARATION OF CHRISTOPHER D. BATICH, Ph.D. UNDER 37 CFR §1.132

Sir:

I, Christopher D. Batich, Ph.D., hereby declare:

THAT, I am a professor of Materials Science and Engineering at the University of Florida and a copy of my current *curriculum vitae*, is attached hereto as Exhibit A;

THAT, I am one of the above-named applicants and inventors of the subject matter described and claimed in patent application Serial No. 09/981,183 (hereinafter the '183 application);

THAT, I have read and understood the '183 application and all Office Actions which have been issued during prosecution of the '183 application, as well as all responses to the Office Actions which have been filed on the applicants' behalf;

AND, being thus duly qualified, do further declare as follows:

Claims 1, 3, 5-9, and 12 in the '183 application have been rejected under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) in the Office Action dated January 20, 2004, on the ground that the inventive entity of the subject matter disclosed in the Lunardi Doctoral Dissertation is not the same as that of

the '183 application. As the Examiner may be aware, when a student is accepted into a graduate program, it is conventional practice within the academic community to assign to that student a graduate committee to review that student's work and to monitor their progress. In most cases, this committee also assists a graduate student in designing a research project and provides a great deal of guidance and direction in the student's research. Thus, it is not uncommon for persons other than the student to be involved in the conception of an invention that arises from the student's research that is described in the student's graduate thesis or dissertation, even though the student is the only person listed as author on a student's thesis or dissertation describing the research project. That is not to say, however, that the graduate committee members are the only persons who provide guidance to a graduate student. Indeed, it is also very common that a graduate student works closely with, and receives guidance and suggestions from, other persons that are not on that graduate student's committee.

These are the circumstances surrounding the subject matter claimed in the '183 application. As evidenced by the signature pages of the Lundardi Doctoral Dissertation, Gilberto Lunardi's graduate research committee consisted of myself, Dr. Eugene Goldberg, Dr. Anthony Brennan, Dr. Kenneth Wagener, Dr. Kenneth Berger, and Dr. Steven Sargent. I was Gilberto's (now Dr. Lunardi) advisor and chair of his graduate research committee. I provided Dr. Lunardi with necessary guidance throughout his graduate research, contributing to experimental design and data interpretation. Dr. Lunardi and I contributed to the conception of the claimed invention and are, therefore, inventors on the '183 application. Although Dr. Goldberg, Dr. Brennan, and Dr. Wagener were members of Dr. Lunardi's research committee and contributed to his research project, the input they provided was not directed to the subject matter of the claimed invention.

Furthermore, Dr. Jorge Zacca, a chemical engineer and staff chemist at Braskem in Triunfo, Brazil, who was not a member of Dr. Lunardi's graduate research committee, synthesized the raw polymer materials and determined the molecular weight and comonomer concentration of the material. Dr. Zacca also contributed to the conception of the claimed invention and is, therefore, an inventor on the '183 application. Dr. Lunardi removed residual monomers and Ziegler-Natta catalysts from the synthesized polymer materials provided by Dr. Zacca, cast films, and evaluated the polymer materials for gas permeabilities. Dr. Sargent, a professor in the Horticultural Sciences

Department at the University of Florida, identified the need for the temperature-sensitive permeable polymer film in the packaging of produce and provided necessary input regarding the respiration rates of produce and target temperatures for the packaging of produce. Dr. Sargent contributed to the conception of the claimed invention and is, therefore, an inventor on the '183 application. Dr. Berger, an organic chemist, was a professor of Applied Arts and Sciences of Packaging within the Agricultural and Biological Engineering Department at the University of Florida at the time the invention was made. Dr. Berger provided necessary input regarding target temperatures for the packaging of produce, contributed significantly to the design of the permeability experiments, and assisted Dr. Lunardi in making the polymer films uniform so that the permeability properties could be subsequently determined. Dr. Berger contributed to the conception of the claimed invention and is, therefore, an inventor on the '183 application.

Accordingly, the subject matter of the claimed invention that is described within the Lundardi Doctoral Dissertation and that is claimed in the '183 application was invented by the named co-inventors of the '183 application, *i.e.*, Dr. Lunardi, Dr. Berger, Dr. Sargent, Dr. Zacca, and myself.

The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or of any patent issuing thereon.

Further declarant sayeth naught.

Signed:

  
Christopher D. Batich, Ph.D.

Date:

5/20/04



## CURRICULUM VITAE

Christopher D. Batich, Ph.D.

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### Education

- 1971-1974 University of Basel (Switzerland); Post-doctoral (physical chemistry) with Professor Edgar Heilbronner, Director of the Physical Chemistry Institute.  
1967-1971 Rutgers University; Ph.D.(organic chemistry), 1974; thesis advisor, Edel Wasserman  
1961-1965 While residing in New Jersey, attended The Pennsylvania State University and obtained a B.S. (pre-medicine), 1965. Financial support was by a PTA scholarship, various loans (all repaid) and part-time work in kitchens, libraries, and laboratories.

### Professional Experience

- 1997-2002 Director, UF Biomedical Engineering Program (Interim first year)  
1981-Present Materials Science and Engineering Dept., University of Florida, Gainesville, FL (Professor since 1988)  
1974-1981 Staff Scientist, Central Research Dept., DuPont Co., Wilmington, DE  
1967-1969 Teaching Assistant, Rutgers University, New Brunswick, NJ  
1965-1967 Quality Control Chemist, White Laboratories (pharmaceutical company), Kenilworth, NJ

### Professional Membership

- American Association for Advancement of Science (AAAS)  
American Chemical Society (ACS)  
Polymer Chemistry Division  
Polymeric Materials Science and Engineering Division  
Society of Biomaterials  
Membership Committee (1995-2000)  
Awards Committee (1996-7)  
Dental Materials Special Interest Group, vice chair (2000-present)  
American Institute of Medical and Biological Engineers (AIMBE)  
Academic Council (1997-2002)  
College of Fellows (1999-present)

### Professional Activities and Honors

- Phi Lambda Upsilon. Section Vice-President, 1970  
Chairman: Organic Chemists Club (Delaware), American Chemical Society, 1978  
Chairman: College-Industry Relations Committee, Delaware Section (ACS), 1979 & 1980  
Chairman: North-east ESCA Users Group, Nomination Committee, 1980-1981  
Member: Florida Section ACS, Public Affairs Committee, 1983  
College of Engineering Sabbatical, 1990-1991; Akzo Biomedical Research Center, Obernburg, Germany  
Award for Excellence in Teaching ("TIP"), F-1995  
Listed in Marquis' Who's Who in Medicine and Healthcare, 1st Edition, 1996.  
Listed in The Official Who's Who of American Inventors, 5th Edition, 1998-99.  
Professional Excellence Program Award ("PEP"), 1998  
American Institute of Medical and Biological Engineering (AIMBE) Fellow (1999)  
Co-Chair, AIMBE Public Information Committee (1999-present)  
Who's Who in Science and Engineering, Millennium Edition. (2000)

College of Engineering Nominee for the 2002 Ernest L. Boyer International Award of Excellence in Teaching, Learning and Technology (2001)

### University Service

Graduate Student Co-Coordinator for Materials Department, 1984-1990  
 Faculty Senate, 1986-1988  
 Biomedical Engineering, curriculum co-organizer and advisor, 1984-1998  
 Biotechnology Patent Committee, 1984-1995  
 FEEDS coordinator for off-campus students, 1987-1991  
 Graduate Council Fellowship Selection Committee for Engineering, 1987-1990  
 Search Committee for UF, VP Research and Dean of Graduate School, 1993  
 College of Engineering, Tenure and Promotion Committee, 1991-1994  
 Chairman: College of Engineering Biomedical Engineering Graduate Academic Program (BEGAP), 1994-1998  
 Member MD/PhD Program Committee, 1994-2000

### Recent Invited Presentations

- 1984 "Surface Derivatization Reactions," Tennessee Eastman Co., Kingsport, TN  
 "Surface Derivatization Reactions," W.R. Grace Co., Columbia, MD  
 "Surface Derivatization Reactions," Los Alamos National Laboratory, NM  
 "Surface Derivatization Reactions," Sandia National Laboratory, NM  
 Federation of Analytical Chemistry and Spectroscopy Society, FACSS Sept. "The Last and Next Decade in Surface Analysis"  
 Kratos Users Group, Poconos, "Angular XPS Studies of Ga/As"  
 "Surface Studies of Polymers," Kimberly-Clark, Roswell, GA
- 1985 "Surface Studies of Polymers," C.R. Bard, Inc., Murray Hill, NJ  
 American Vacuum Society Meeting (Florida Section) -Copper/FEP Adhesion Silanes, Surfaces and Interfaces Symposium (June), Snowmass, CO
- 1986 FEP/Copper Adhesion, General Electric Solid State Meeting, Gainesville, FL  
 Biomedical Applications of XPS, Spectroscopy Society of Pittsburgh (April)  
 Tutorial lecture on "Surface Probes of Polymer Structure and Properties," Polymer Products Department, DuPont Co., Wilmington, DE  
 Polymer Surface Studies, Johnson & Johnson, Medical Polymers Research Committee Meeting, Gainesville, FL
- 1987 Symposium on Hyphenated Techniques, Pittsburgh Conference on Analytical Chemistry Surface Analysis, Monsanto Corp., Pensacola, FL  
 Department of Surgery, U. Florida Medical School "Research Projects"  
 Engelhard Industries, "Surface Analysis," Woodridge, NJ
- 1988 IBM Adhesion Course, Boca Raton, FL (April)  
 "Surfaces of Catheters," ASTM-F4 Meeting, Atlanta, GA
- 1989 "Surfaces of Catheters," Res. Calc. Kinetics Soc., St. Louis, MO  
 "The Effect of Polymer Matrix on the Growth of Tissue," 3rd Annual Research Highlights Meeting of the Center for Surface Science and Engineering, UF, Gainesville  
 "Incineration of Plastics," Center for Aeronormy, UF, Gainesville  
 "Surfaces of Biomaterials," North Carolina State University, Raleigh, N.C.
- 1990 "Incineration of Plastics," Amer. Inst. of Chem. Eng. Nat'l. Meeting (March)
- 1991 "Surfaces Analysis of Biomaterials," Akzo (Arnhem, Netherlands)  
 "Surfaces of Biomaterials," Max-Planck Institute for Polymer Research (Mainz, Germany)  
 "Overview of Research," ARLO (Obenburg, Germany)  
 "Inhibition of Oxalate Encrustation," ROCK Society Meeting (Cleveland)
- 1992 "Choosing the Right Surface Analytical Method for Polymers," Royal Society of Chemistry Annual Congress; April 14 (Manchester, UK)  
 "Safe Plastics," at Treeo Center, Course on Disposal of Biomedical Waste, June 1, 1992, (Gainesville)



- 1993 Biomaterials for Tissue Regeneration, Center for Wound Healing, UF
- 1994 Silicone Toxicity Symposium, Oct. 4 (Dallas, TX)
- 1995 Immunology of Silicone Symposium, NIH/NCI, March 1995 (Bethesda, MD)  
Society For Biomaterials - pH Sensitive Polymers (March, San Francisco)  
Center for Occupational Health - Silicones (September, Detroit)
- 1996 "Tissue Regeneration," Monsanto Co. (January, St. Louis, MO)
- 1998 "pH Sensitive Drug Delivery," Pharmacology Department. Seminar, (September, University of Florida)
- 1999 "Surface Changes of Biomaterials - Needed Data," 7<sup>th</sup> Annual Symposium of the Florida Chapter of the American Vacuum Society and the 17<sup>th</sup> Annual Meeting of the Florida Society for Microscopy (March, University of Central Florida, Orlando, FL)
- 2000 "Biomedical Engineering and Biomaterials" Guest speaker for the 37<sup>th</sup> Annual Junior Science, Engineering and Humanities Symposium (JSEHS)  
"Development and In Vitro Evaluation of Sustained Release Ilomastat Devices" "Transactions of the society of Biomaterials" Annual meeting May 2000.  
"Microspheres and Coatings of pH-sensitive Polymers for Biomedical Engineering Uses," 2000 Florida Inter-Research Experience for Undergraduates (NSF Funded) July 2000.

#### Selected Courses Taught ( \*videotaped course, "FEEDS")

Introduction to Polymer Science\*

Polymer Physics

Instrumental Methods of Polymer Analysis\*

Vacuum Science and Technology (AVS short course, 1983,1984)

Surface Analysis (MAIC short course, 1984-1987)

Biomaterials\*

Tissue Engineering

Polymer Composites (33%)

Thin Film Adhesion (AVS short course, San Jose, March 1986; Meadowlands, NJ, September 1987)

#### Publications/Reviewed (excluding patents, \* indicates invited paper)

1. "Mass Spectral Evidence for Catenanes Formed via a Mobius-Strip Approach," D. Ben-Effraim, C. Batich, and E. Wasserman, *J. Amer. Chem. Soc.*, **92**, p. 2123 (1970).
2. "The Photoelectron Spectra of Cyclooctatetraene and its Hydrogenated Derivatives," C. Batich, P. Bischof, and E. Heilbronner, *J. Electron Spectrosc.*, **1** p. 33 (1972).
3. "Photoelectron Spectra of Phosphabenzene, Arsabenzene, and Stibabenzene," C. Batich, E. Heilbronner, V. Hornung, A. J. Ashe III, D. T. Clark, U. T. Cobley, D. Kilcast, and I. Scanlan, *J. Amer. Chem. Soc.*, **95**, p. 928 (1973).
4. "Ionization Potentials of Deformed Pi-Bonds," C. Batich, O. Ermer, E. Heilbronner, and J. Wiseman, *Angew. Chem., Int. Ed. Eng.*, **12**, p. 312 (1973).
5. "Bemerkung zur Gleichheit der Aufspaltung  $\epsilon_1$  (zwischen den ersten beiden Pi-Ionisationspotentialen) und  $\epsilon_E$  zwischen den entsprechenden  $r$  - Uebergangsenergien) des Spiro (4,4) nonatetraens," C. Batich, E. Heilbronner, and M. Semmelhack, *Helvetica Chimica Acta*, **56**, p. 2110 (1973).
6. "The Photoelectron Spectra of Alkyl Peroxides," C. Batich and Waldemar Adam, *Tet. Lett.*, p. 1467 (1974).
7. "The Ionization Energies of Bridged <1A> Annulenes and of Dicyclohepta <cd,gh> Pentalene," C. Batich, E. Heilbronner, and E. Vogel, *Helvetica Chimica Acta*, **57**, p. 2288 (1974).
8. "Equivalence of the Energy Gaps  $\epsilon_1$  (1,2) and  $\epsilon_E$  (1,2) Between Corresponding Bands in the Photoelectron (I) and Electronic Absorption (E) Spectra of Spiro <4,4> nonatetraene. An Amusing Consequence of Spiro Conjugation," C. Batich, E. Heilbronner, E. Rommel, M. Semmelhack and J. S. Foos, *J. Amer. Chem. Soc.*, **96**, p. 7662 (1974).
9. "The Electronic Structure of Vinyl Ethers and Sulfides with Interrupted Conjugation Examined by Photoelectron Spectroscopy," C. Batich, E. Heilbronner, C. B. Quinn, and J. Wiseman, *Helvetica Chemic Acta*, **59**, p. 512-522 (1976).
10. "Photoelectron Spectroscopy of Bis (-allyl) Nickel and Its Methyl Substituted Derivatives: Support

- for the Near Validity of Koopmans' Theorem," C. Batich, J. Amer. Chem. Soc., **98**, p. 7585-7590 (1976).
11. "Surface Characterization of Acid- and Base-treated Chromosorb W by Electron Spectroscopy for Chemical Analysis," M.A. Kaiser and C. Batich, J. of Chromatography, **175**, p. 174-177 (1976).
  12. "Radical Cation States of 2,3,5,6-Tetramethylene-norborane, 2,3,5,6-Tetramethylenebicyclo <2.2.2> Octane and of Related Compounds," M. Mohraz, C. Batich, E. Heilbronner, P. Vogel, and P. A. Carrupt, Recl. Trav. Chem. Pays-Bas, **95**, p. 362-367 (1978).
  13. "Electronic Structure of Metalorganic Compounds 6. The Photoelectron Spectra of Ni, Pd, Pt-diallyl," M. Bohm, R. Gleiter, C. Batich, Helvetica Chim. Acta, **63** (4), p. 990-1005 (1980).
  - 14.\* "Chemical Labels to Distinguish Surface Functional Groups Using X-ray Photoelectron Spectroscopy (ESCA)," C. Batich and R. Wendt, ACS Symposium Series No. 162 p. 221-235. "Photon, Electron and Ion Probes of Polymer Structure and Properties," D. Dwight, T. Farbish, and H. R. Thomas, ed. (1981).
  15. "X-ray Photoelectron Spectroscopy Study of the Effect of Ozone on Various Styrene/Butadiene Co-polymers," K. Stephens, M. Ammons, C. Batich, C. Beatty, and W. Swartz, ACS Symposium Series No. 229, "The Effects on Hostile Environments as Coatings and Plastics," pp. 279-290 (1983).
  16. "X-ray Photoelectron Spectroscopy of Nitroso Compounds," C. Batich and D. Donald, J. Amer. Chem. Soc., p. 2758 (1984).
  17. "Surface Studies of Calculi Deposition on Foley Catheter Materials," C. Batich, C. Cheng, C. Johnson, V. Rodriguez, and S. Batich, Biomaterials Transactions, Volume VII, p. 31 (1984).
  18. "Ultrastructure of Whewellite Kidney Stones: Electron-analytical Investigation," L Ogbugi, C. Batich, and B. Finlayson, J. Ultrastructural Research, **90**, p. 1-8 (1985).
  19. "Polymers as Moisture Barriers to Maintain Seed Quality," S. West, S. Loftin, M. Wahl, C. Batich, and C. Beatty, Crop Sci., **25**, p. 941-945 (1985).
  - 20.\* "Matrix Mineral Configuration in Whewellite Kidney Stones: Ultrastructural Analysis," L Ogbugi, C. Batich, and B. Finlayson, Urolithiasis and Related Clinical Research, edited by P. O. Schwillie, L. H. Smith, W. G. Robertson, and W. Vahlensieck (Plenum Pub. Corp.), pp. 711-714 (1984).
  - 21.\* "XPS Studies of Polymeric Surfaces and Interfaces," C. Batich, Surfaces Silanes and Interfaces, ed. D. Lyden, Gordon and Breach Science Pub., NY, pp. 215-234 (1986).
  22. "Custom-made Vaginal Balloons for Strengthening Circumvaginal Muscle Strength," R. Abrams, C. Batich, M. Dougherty, P. McKey, Y. C. Un, and H. Parker, Biomaterials, Medical Devices and Artificial Organs, **14**, pp. 239-248 (1986).
  23. "Surface Modification: I, Graft Polymerization of Acrylamide Onto LDPE by Ce<sup>4+</sup> Induced Initiation," C. Batich and A. Yahiaoui, J. Polym. Sci., Polym. Chem. Ed., **25**, p. 3479-3488 (1987).
  24. "New Attachment Formation Following Controlled Tissue Regeneration Using Biodegradable Membranes," I. Magnusson, C. Batich, and B. Collins, J. Periodontology, **59**, pp. 1-6 (1988).
  25. "Surface Segregation and Low Temperature Oxidation of Ni-Cr Alloys," S. Jeng, P. Holloway, C. Batich, and S. Hofmann, J. Vac. Sci. Tech., **A5** (4), p. 650-651 (1987) (summary abstract).
  26. "The Effect of Exercise on the Circumvaginal Muscles: Pilot Study Results," M. Dougherty, R. Abrams, C. Batich, P. McKey, and R. Thomas, Florida Nursing Review, **2**, pp. 12-13 (1987).
  27. "Effect of Exercise on the Circumvaginal Muscles (CVM)," M. Dougherty, R. Abrams, C. Batich, K. Bishop, and P. Gimotty, Neurology and Urodynamics, **6**, pp. 189-190 (1987) (extended abstract).
  28. "Water and Abrasive Effects on 3-body Wear of Dental Composites," D. Sarrett, K-J. Solderholm, and C. Batich, J. Dental Research, **67**, p. 362 (1988) (reviewed abstract).
  - 29.\* "Chemical Derivatization Surface Analysis," C. Batich, J. Applied Surface Science, **32**, pp. 57-73 (1988).
  30. "The Dynamic Characteristics of the Circumvaginal Muscles (CVM) in Non-parturient and Parturient Women," J. Samples, M. Dougherty, R. Abrams, and C. Batich, JOGNN, May issue, pp. 194-201 (1988).
  - 31.\* "Co-combustion in Community Waste to Energy Systems," A. Green, et al., in Co-Combustion, ed. A. Green, pp. 13-28 (1988). Joint Power Generation Conference, Philadelphia, PA, September 1988.
  32. "Variation in the Apparent Coefficient of Friction of Wheat on Galvanized Steel," S. A. Thompson, R. A. Bucklin, C. D. Batich, and I. J. Ross, Am. Soc. Agri. Engr., **31**, p. 1518-1524 (1988).
  33. "Toxic Hydrolysis Product from a Biodegradable Foam Implant," C. Batich, R. King, and J. Williams, J. Biomed. Mater. Res.: Applied Biomaterials, **23** pp. 311-319 (1989).

34. "Polyaniline via Schiff Base Chemistry," C. Batich, P. H. Gebert, D. B. Tanner, and S. L. Herr, Synthetic Metals, **29**, pp. E371-376 (1989).
- 35.\* "The Effect of Exercise on the Circumvaginal Muscles in Postpartum Women," M. C. Dougherty, K. R. Bishop, R. M. Abrams, C. D. Batich, and P. A. Gimotty, J. of Nurse-Midwifery, **1**, p. 8-14 (January/ February 1989).
36. "Apatite Deposition on Urinary Catheter Materials," B. Piper and C. Batich, Transactions of the Society of Biomaterials, **12**, p. 221 (1989).
37. "Chain Propagation/Step Propagation Polymerization. III. An XPS Investigation of Poly(oxyethylene)-b-Poly(pivalolactone) Telechelomer," K. Wagener, C. Batich, B. Kirsch, and S. Wanigatunga, J. Polym Sci.: A: Polym. Chem., **27**, pp. 2625-2631 (1989).
38. "Surface Passivation of Ni/Cr Alloy at Room Temperature," S. Jeng, P. Holloway, C. Batich, Surface Science, **227**, p. 278 (1989).
39. "Chromatic Changes in Polyaniline Films," C. Batich, H. Laitinen, and H. Zhou, J. Electrochem. Soc., **137**, pp. 883-885 (1990).
40. "Surface Morphology Study of Foley Catheter Balloon After Inflation," C. Batich, and B. Piper, Transactions of the Society of Biomaterials (1990 meeting) **13**, p. 117 (1990).
41. "Synthesis and Applications of a Vinylsilazane Preceramic Polymer," Wm. Toreki, C. Batich, M. Sacks, A. Morrone, Ceram. Eng. Soc. Proc., **11** (9-10), pp. 1371-1386 (1990).
42. "Oxalate Degradation by Alginate Microencapsulation of Oxalobacter Formigene," F. Vaghefi, C. Batich, C. Shevock, Transactions of the Society of Biomaterials (1990 meeting) **13**, p. 102 (1990).
43. "Toxic Products from Co-Combustion of Institutional Waste," A. Green, C. Batich, D. Powell, and et al., 83rd Annual Meeting of the Air and Waste Management Association, Forum 90, June 24-29, 1990, Pittsburgh, Pennsylvania.
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 Travis Arola (M.S.), Physical Modeling of Coronary Arteries (Fall 1998).  
 Gilberto Lunardi (Ph.D.) – Selective membrane transport  
 N. Richards (Ph.D.) – Dental Bonding Agents  
 John Rotella (M.S.) – Salivary Glucose Level Detection  
 Matthew Eadens (M.S.) - Endovascular Drug Delivery

Reviewer For

Encyclopedia of Polymer Science and Technology  
 Engineered Materials Handbook (ASM)  
 J. American Ceramics Society  
 J. American Chemical Society  
 J. Electron Spectroscopy  
 J. Industrial and Engineering Science  
 J. Organic Chemistry  
 J. Physical Chemistry  
 J. Surface and Interfacial Science  
 J. Vacuum Science and Technology  
 Macromolecules



National Institutes of Health (research resources, small business grants/SBIR)  
National Science Foundation  
Scanning Electron Microscopy  
Petroleum Research Fund  
J. Applied Biomaterials  
J. Biomedical Materials Research  
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National Institutes of Health (research resources, small business grants)  
National Science Foundation  
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Scanning Electron Microscopy

Panel Member For

Polymer Principles In the Undergraduate Curriculum, Florida ACS meeting, panel discussion (1986).  
National Institute for Trial Advocacy, course requiring expert witness (1985-1994).  
Materials Research Society, Spring 1988 meeting, co-organizer of Adhesion Symposium.

Recent Meeting Activities:

Co-chair, "Surface Analysis" session of Soc. for Biomat. Meeting (San Francisco, 1995).  
Co-chair, "Silicones" session of World Biomat. Congress Meeting (Toronto, 1996).  
Co-chair, "Modification of Biomaterials Surfaces" session of Soc. for Biomat. Meeting (New Orleans, 1997).  
Co-chair, "Progress in Drug Delivery" session of Soc. for Society of Biomaterials Meeting (St. Paul, Minn., 2001)  
Chair, "Dental Materials" session for Society of Biomaterials Meeting (Tampa, FL 2002)

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